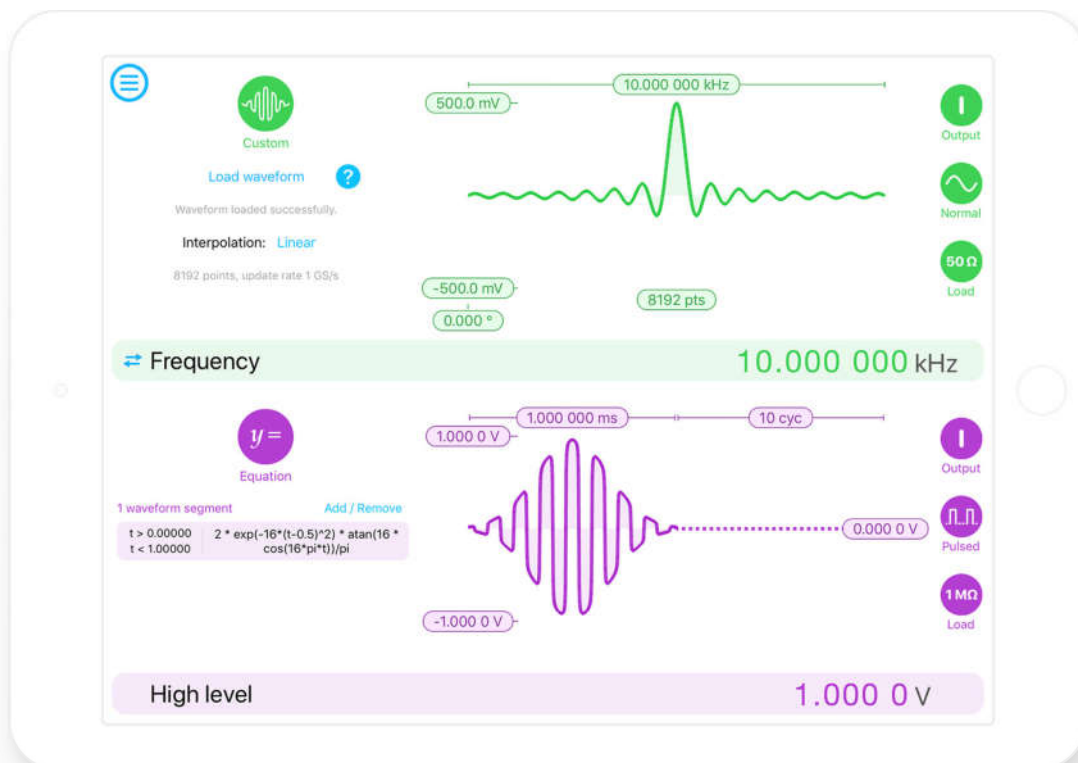




# Arbitrary Waveform Generator

## Description

The Moku:ArbitraryWaveformGenerator can generate custom waveforms with up to 65,536 points at update rates of up to 1 GS/s. Waveforms can be loaded from a file, or input as a piece-wise mathematical function with up to 32 segments, enabling you to generate truly arbitrary waveforms. In pulsed mode, waveforms can be output with more than 250,000 cycles of dead time between pulses, allowing you to excite your system with an arbitrary waveform at regular intervals over extended periods of time.



## Features

- Select a pre-set waveform, load custom waveforms from a file, or describe your waveform mathematically using the Moku:Lab's in-built equation editor
- Configure pulsed arbitrary waveforms with up to 250,000 cycles of dead time between pulses
- Synchronize the phase of both output channels
- Generate arbitrary waveforms with up to 65,536 points



# Specifications

## Common

### Overview

Channels	2
Bandwidth (-3 dB)	> 300 MHz into 50 $\Omega$
Sampling rate	1 GS/s per channel
Source impedance	50 $\Omega$
Output load	50 $\Omega$ / 1 M $\Omega$
Waveforms	Sine, Gaussian, Exponential Fall, Exponential Rise, Sinc, Equation, Custom (from file)

### Amplitude

Output voltage range	$\pm 1$ V into 50 $\Omega$ $\pm 2$ V into 1 M $\Omega$
Resolution	100 $\mu$ V

### DC offset

Range (peak AC + DC)	$\pm 1$ V into 50 $\Omega$ $\pm 2$ V into high-impedance
Resolution	100 $\mu$ V

### Phase offset

Range	0° to 360°
Resolution	0.001°



## Waveform

### Custom

Maximum output rate	125 MS/s	65536 points
	250 MS/s	32768 points
	500 MS/s	16384 points
	1 GS/s	8192 points
Text file type	Comma- or newline-delimited text	
File import options	SD card, Clipboard, My Files	
Interpolation	None, Linear	
Minimum edge time	2 ns	
Overshoot	≤ 10% for edge times between 2 ns and 8 ns ≤ 2% for edge times greater than 8 ns	
Jitter (cycle-to-cycle)	< 1 ns	
Pulse width	2 ns to period	
Period range	1000 s to 10 ns	